

Claims

1. An energy storage and delivery device comprising:

a capacitor portion consisting of singular or multiple capacitors for instantaneously capturing electrical energy from a power source for the purpose of charging the battery portion,

a charge circuit portion which transfers and regulates a charge current and a charge voltage from the capacitor portion to the battery portion,

and a chargeable battery portion - which can be of any chargeable / rechargeable battery cell(s) such as, but not limited to, NiCad, NiMH or Lithium-ion.

2. The energy storage and delivery device, according to claim 1, wherein the capacitor portion, when the unit is connected to an electrical source, captures an electric charge over a short period of time for the purpose of charging the chargeable battery portion;

the capacitor portion, when fully charged, transfers its electrical energy to the battery portion over an optimal period of time and at an optimal current throughout the various stages of the battery charging process;

this transfer and regulation of the charging current from the capacitor portion to the battery portion is accomplished via the charge circuit portion.

3. The energy storage and delivery device, according to claim 2, wherein the charge circuit portion detects when the capacitor portion is fully charged in order to begin the charging process of the battery portion;

the charge circuit portion also detects the amount of electric current required to optimally charge the battery portion – and varies the charging current from the capacitor portion to the battery portion accordingly;

as the battery portion is being charged, the charge circuit portion is also able to detect when the electric device is in use, and therefore transfer additional electric current for the operation of the device.